LISTING OF CLAIMS:

1. (Currently Amended) A method of configuring an access point based RF network, the network comprising at least two nodes, each having a controller, a data store, and at least one transceiver for communicating with other nodes, each transceiver having a unique identifier, the method comprising the steps of:

(a) assigning a predetermined value to a variable n;

(b) selecting one certain of the nodes and associating it with the value of n;

(c) paging all other nodes from a node associated with the value of n;

(d) in a node associated with the value of n, noting nodes which reply to paging and associating them with the value of (n+1);

(e) making all nodes associated with the value of n or with lower values unresponsive to paging;

(f) incrementing the value of n; and

(g) repeating steps (c) through (f) until no nodes reply to paging,

whereby nodes beyond a transmission range of other nodes but within transmission range of intermediate nodes become known to said other nodes and become accessible to said other nodes by relaying through said intermediate nodes.

2. (Previously Presented) The method of claim 1, wherein said certain node is further a gateway to another network.

3. (Previously Presented) The method of claim 1, further comprising step:

(h) repeating steps (a) through (g) with a different node selected as the certain node.

4. (Previously Presented) The method of claim 3, wherein any node selected as the certain node is further a gateway to another network.

5. (Previously Presented) The method of claim 1, wherein the RF network is a short-range RF network.

6. (Currently Amended) The ~~Method~~ method of claim 5, wherein the short-range RF network is a Bluetooth network.

7. (Previously Presented) The method of claim 1, wherein:

if a node comprises at least two transceivers, the first one to answer paging is designated as a slave transceiver of the RF network and least one of the other transceivers is designated as a master transceiver of the RF network, and each transceiver designated as a master does not answer paging.

8. (Previously Presented) The method of claim 7 wherein in step (c) paging is performed by the master.

9. (Previously Presented) The method of claim 1, wherein a node further includes a transceiver for communication with wireless terminals, whereby a wireless terminal in transmission range of a node may communicate with another wireless terminal in transmission range of a node.

10. (Previously Presented) The method of claim 1, wherein a transceiver further communicates with wireless terminals, whereby a wireless terminal in transmission range of a node may communicate with another wireless terminal in transmission range of a node.

11. (Previously Presented) The method of claim 2, wherein a node further includes a transceiver for communication with wireless terminals, whereby a wireless terminal in transmission range of a node may communicate with another wireless terminal in transmission range of a node or with an entity on said other network.

12. (Previously Presented) The method of claim 1, wherein each transceiver further has a password associated with it, and wherein:

in step (c), passwords are included in paging; and

a node does not reply to paging unless the password included in paging matches the password associated with the transceiver.

13. (Currently Amended) A method of configuring an access point based RF network, the network comprising a plurality of network nodes for communicating with other nodes, each having a controller unit and a data store, the method comprising the steps of:

a) storing identifiers of all nodes on the network in a data store accessible to at least one node;

b) paging other nodes from the at least one node ~~other nodes~~;

c) detecting other nodes within the coverage area of the at least one node by receiving responses of said detected nodes to paging;

d) updating information regarding said detected nodes according to the received responses of said detected nodes to paging;

e) associating said detected nodes with a first value of a dynamic variable, the value of the dynamic variable depending on the placement of each said detected node in the network; and

f) propagating the updated information to said detected nodes in the network, whereby nodes beyond a transmission range of other nodes but within transmission range of intermediate nodes become known to said other nodes and become accessible to said other nodes by relaying through said intermediate nodes.

14. (Previously Presented) The method of claim 13, wherein each node comprises a transceiver connected to the controller unit for communicating with other transceivers, each transceiver having a unique identifier.

15. (Previously Presented) The method of claim 14, further comprising:

g) incrementing the value of the dynamic variable;

h) paging from a transceiver of each said detected node other transceivers;

i) detecting other nodes within the coverage area of the transceiver of each said detected node by receiving responses of said newly detected nodes' transceivers to paging;

j) updating information regarding said newly detected nodes' transceivers to paging;

k) associating newly detected nodes of the network with the incremented value of the dynamic variable; and

l) propagating the updated information to all detected nodes in the network.

16. (Previously Presented) The method of claim 15, further comprising repeating steps g) through l) until every node of the network is configured.

17. (Previously Presented) The method of claim 13, wherein the at least one node selected as a control node and said control node is further a gateway to another network.

18. (Previously Presented) The method of claim 15, further comprising the step of repeating steps (a) through (l) with a different node selected as a control node.

19. (Previously Presented) The method of claim 18, wherein any node selected as the control node is further a gateway to another network.

20. (Previously Presented) The method of claim 13, wherein the RF network is a Bluetooth network.

21. (Previously Presented) The method of claim 15, wherein:

if a node comprises at least two transceivers, the first one to answer paging is designated as a slave transceiver of the RF network and least one of the other transceivers is designated as a master transceiver of the RF network, and each transceiver designated as a master does not answer paging.

22. (Previously Presented) The method of claim 21, wherein paging is performed by the master.

23. (Previously Presented) The method of claim 15, wherein a node further includes a transceiver for communication with wireless terminals, whereby a wireless terminal in transmission range of a node may communicate with another wireless terminal in transmission range of a node.

24. (Previously Presented) The method of claim 15, wherein a transceiver further functions to communicate with wireless terminals, whereby a wireless terminal in transmission range of a node may communicate with another wireless terminal in transmission range of a node.

25. (Previously Presented) The method of claim 16 wherein a node further includes a transceiver for communication with wireless terminals, whereby a wireless terminal in transmission range of a node may communicate with another wireless terminal in transmission range of a node or with an entity on said other network.

26. (Previously Presented) The method of claim 15, wherein each transceiver further has a password associated with it, and wherein:

passwords are included in paging; and

a transceiver does not reply to paging unless the password included in paging matches the password associated with the transceiver.

27. (Previously Presented) The method of claim 16, wherein further:

each transceiver has associated with it a portable machine-readable tag containing the transceiver's unique identifier;

associated with the network is a tag reader for reading the machine-readable tags; and

step (a) comprises substeps:

(a1) presenting each tag to the tag reader; and

(a2) transferring each output of the tag reader to the data store of the control node.

28. (Previously Presented) The method of claim 26, wherein further:

each transceiver has associated with it a portable machine-readable tag containing the transceiver's unique identifier and password;

associated with the network is a tag reader for reading the machine-readable tags; and

step (a) comprises substeps:

(a1) presenting each tag to the tag reader; and

(a2) transferring each output of the tag reader to the data store of the first node.

29. (Currently Amended) A self-configuring <u>access point based</u> RF network, the network comprising:

a plurality of nodes for communicating wirelessly with other nodes of the RF network, wherein at least one of the nodes is selected as a control node, each node including:

a control logic;

a data store connected to the control logic;

at least one transceiver connected to the control logic and identified by a unique address for communicating wirelessly with other nodes of the network;

a transceiver list database connected to the data store for storing updateable information of all transceivers of the RF network for network configuration; and

a dynamic variable linked to the transceiver list database for indicating position of each node in the RF network relative to the control node,

wherein a transceiver of the control node pages other transceivers in its transceiver list; a transceiver of the control node detects other nodes within its coverage area according to response of said other transceivers to paging; the control node's transceiver list is updated according to said response of said other transceivers to paging; the control logic associates detected transceivers' information in the control node's transceiver list with a current value of the dynamic variable; and the control logic directs propagating the updated contents of the control node's transceiver list to all detected nodes in the network,

whereby nodes beyond a transmission range of other nodes but within transmission range of intermediate nodes become known to said other nodes and become accessible to said other nodes by relaying through said intermediate nodes.

30. (Previously Presented) The RF network of claim 29, wherein:

if a node comprises at least two transceivers the control logic is arranged to designate the first one to answer paging as a slave transceiver of the RF network and to designate at least one of the other transceivers as a master transceiver of the RF network, and wherein each transceiver designated as a master does not answer paging.

31. (Previously Presented) The RF network of claim 29, wherein a node further includes a transceiver for communicating with wireless terminals, whereby a wireless terminal in transmission range of a node may communicate with another wireless terminal in transmission range of a node.

32. (Previously Presented) The RF network of claim 29, wherein a transceiver further communicates with wireless terminal, whereby a wireless terminal in transmission range of a node may communicate with another wireless terminal in transmission range of a node.

33. (Previously Presented) The RF network of claim 29, wherein the control node is further a gateway to another network.

34. (Previously Presented) The RF network of claim 31, wherein the control node is further a gateway to another network, whereby a wireless terminal in transmission range of a node may communicate with a terminal on said other network.

35. (Previously Presented) The RF network of claim 29, wherein:

associated with each transceiver is a unique password;

provided with each transceiver is a machine-readable tag on which is recorded the transceiver's unique address and password, and

associated with the control node is a reader for reading the unique addresses and passwords from the tags and storing them in the first node's transceiver list.

36. (Canceled)

37. (Currently Amended) The RF network of claim ~~36~~ 29, wherein:

(f) the control logic of each detected node directs incrementing the dynamic variable;

(g) a transceiver of each node pages other transceivers in its transceiver list;

(h) each node detects other nodes within the coverage area of its transceiver according to response of said other transceivers to paging;

(i) each node's control logic directs updating the node's transceiver list according to response of said other transceivers to paging;

(j) the node's control logic associates detected transceivers' information in the node's transceiver list with a current value of the dynamic variable; and

(k) the control logic directs propagating the updated contents of each node's transceiver list to all detected nodes in the network.

38. (Previously Presented) The RF network of claim 37, wherein functions (g) through (k) are repeated until all nodes of the network are detected.

39. (Currently Amended) ~~The RF network of claim 38, wherein~~ A self-configuring RF network comprising:

a plurality of nodes for communicating wirelessly with other nodes of the RF network, wherein at least one of the nodes is selected as a control node, each node including:

a control logic;

a data store connected to the control logic;

at least one transceiver connected to the control logic and identified by a unique address for communicating wirelessly with other nodes of the network;

a transceiver list database connected to the data store for storing updateable information of all transceivers of the RF network for network configuration; and

a dynamic variable linked to the transceiver list database for indicating position of each node in the RF network relative to the control node;

wherein associated with each transceiver is a unique password, provided with each transceiver is a machine-readable tag on which is recorded the transceiver's unique address and password, and associated with the control node is a reader for reading unique addresses and passwords from the tags and storing them in a first node's transceiver list,

wherein:

(a) a transceiver of the control node pages other transceivers in its transceiver list;

(b) a transceiver of the control node detects other nodes within its coverage area according to response of said other transceivers to paging;

(c) the control node's transceiver list is updated according to said response of said other transceivers to paging;

(d) the control logic associates detected transceivers' information in the control node's transceiver list with a current value of the dynamic variable; and

(e) the control logic directs propagating the updated contents of the control node's transceiver list to all detected nodes in the network; and

(f) the control logic of each detected node directs incrementing the dynamic variable;

(g) a transceiver of each node pages other transceivers in its transceiver list;

(h) each node detects other nodes within the coverage area of its transceiver according to response of said other transceivers to paging;

(i) each node's control logic directs updating the node's transceiver list according to response of said other transceivers to paging;

(j) the node's control logic associates detected transceivers' information in the node's transceiver list with a current value of the dynamic variable;

(k) the control logic directs propagating the updated contents of each node's transceiver list to all detected nodes in the network; and

functions (g) through (k) are repeated until all nodes of the network are detected; and

wherein the control logic of each node computes an indication of current load carried by the node;

each node dynamically transmits its load indication at least to nodes within its transmission range; and

each node dynamically receives and stores load indications received from other nodes.

40. (Previously Presented) The RF network of claim 39, wherein the control logic of each node dynamically calculates routes for transmitting messages to the first node including relays through other nodes for nodes not within transmission distance of the control node.

41. (Previously Presented) The RF network of claim 40 wherein a node not within transmission distance of the control node selects routes to the first node traversing the fewest other nodes.

42. (Previously Presented) The RF network of claim 41 wherein if several routes traverse the fewest other nodes, a route is selected which has traverses nodes having least aggregate load indication.

43. (Previously Presented) The RF network of claim 29, wherein the RF network is a short-range RF network.

44. (Previously Presented) The RF network of claim 43, wherein the short-range RF network is a Bluetooth network.

45. (Previously Presented) The RF network of claim 29, wherein a transceiver not within transmission range of a certain node communicates with the certain node by relaying through other of the nodes.

46. (Currently Amended) A node for use in a self-configuring access point based RF network, comprising:

a backbone transceiver identified by a unique address and associated with a password, for communicating with other nodes of the network; and

control logic configured to detect when the backbone transceiver receives a paging message directed to its unique address, and in response, to direct that:

a password received in the paging message be verified as the password associated with the backbone transceiver;

a node transceiver list received in the paging message, containing addresses and passwords of other nodes in the network, be received and stored;

a value "n" of a dynamic variable received in the paging message be received and stored; ~~and~~

the node becomes unresponsive to further paging messages; and

nodes beyond a transmission range of the node but within transmission range of intermediate nodes become known to the node and become accessible to the node by relaying through said intermediate nodes.

47. (Currently Amended) The node ~~according to~~ of claim 46, further comprising a second backbone transceiver, and wherein the control logic is further configured to direct that:

the backbone transceiver which received the paging message is designated a slave transceiver;

the other backbone transceiver is designated a master transceiver;

the value "n" of the dynamic variable is incremented;

the master transceiver transmits to each transceiver in the node transceiver list a paging message including:

the paged transceiver's password;

the node transceiver list; and

the value of the dynamic variable.

48. (Currently Amended) ~~A~~ The node ~~according to~~ of claim 46, comprising a transceiver for communicating with mobile terminals, whereby a mobile terminal in transmission range of a node may communicate with another mobile terminal in transmission range of a node.

49. (Currently Amended) ~~A~~ The node ~~according to~~ of claim 46, wherein a backbone transceiver also communicates with mobile terminals, whereby a mobile terminal in transmission range of a node may communicate with another mobile terminal in transmission range of a node.

50. (Currently Amended) ~~A~~ The node ~~according to~~ of claim 46 wherein the backbone transceivers are short-range RF transceivers.

51. (Currently Amended) ~~A~~ The node ~~according to~~ of claim 50 wherein the transceivers are Bluetooth transceivers.

52. (Currently Amended) A self-configuring access point based RF network, the network comprising:

a plurality of nodes for communicating wirelessly with other nodes of the RF network, wherein at least one of the nodes is selected as a control node, each node including:

a control logic;

a data store connected to the control logic;

at least one transceiver connected to the control logic identified by a unique address for communicating wirelessly with other nodes of the network either directly or through one or more relay nodes; and

software means operative on the control logic for:

maintaining in the data store a transceiver list database containing updateable information of all transceivers of the RF network for network configuration;

indicating, with a dynamic variable linked to the transceiver list database, position of each node in the RF network in relation to the control node;

periodically communicating wirelessly among the nodes of the RF network for exchanging updated configuration information and dynamic variable information; and

updating current network configuration information and dynamic variable information within the data store,

whereby nodes beyond a transmission range of other nodes but within transmission range of intermediate nodes become known to said other nodes and become accessible to said other nodes by relaying through said intermediate nodes.

53. (Previously Presented) The RF network of claim 52, wherein the software means is further operative for determining, according to dynamic variable information, a route traversing the fewest nodes from a node to the control node.

54. (Previously Presented) The RF network of claim 53, wherein the software means is further operative for:

dynamically updating load information of a node and at least nodes within communication distance of the node; and

selecting, according to load information, a route traversing least loaded nodes from among two or more routes traversing equal numbers of nodes from a node to the control node.

55. (Currently Amended) A method of configuring an access point based RF network, the method comprising the steps of:

electronically maintaining, for network configuration, a transceiver list database containing updateable information regarding all transceivers of the RF network;

indicating position of each node in RF network in relation to a control node with a dynamic variable linked to the transceiver list database;

periodically communicating wirelessly between nodes of the RF network for exchanging updated configuration information and dynamic variable information; and

updating current network configuration information and dynamic variable information within the transceiver list database,

whereby nodes beyond a transmission range of other nodes but within transmission range of intermediate nodes become known to said other nodes and become accessible to said other nodes by relaying through said intermediate nodes.

56. (New) The method of claim 1, wherein:

control logic of each node computes an indication of current load carried by the node;

each node dynamically transmits its load indication at least to nodes within its transmission range; and

each node dynamically receives and stores load indications received from other nodes.

57. (New) The method of claim 13, wherein:

control logic of each node computes an indication of current load carried by the node;

each node dynamically transmits its load indication at least to nodes within its transmission range; and

each node dynamically receives and stores load indications received from other nodes.

58. (New) The RF network of claim 29, wherein:

the control logic of each node computes an indication of current load carried by the node;

each node dynamically transmits its load indication at least to nodes within its transmission range; and

each node dynamically receives and stores load indications received from other nodes.

59. (New) The node according to claim 46, further comprising:

the control logic computes an indication of current load carried by the node;

the node dynamically transmits its load indication at least to nodes within its transmission range; and

the node dynamically receives and stores load indications received from other nodes.

60. (New) The RF network of claim 52, wherein:

the control logic of each node computes an indication of current load carried by the node;

each node dynamically transmits its load indication at least to nodes within its transmission range; and

each node dynamically receives and stores load indications received from other nodes.

61. (New) The method of claim 55, wherein:

control logic of each node computes an indication of current load carried by the node;

each node dynamically transmits its load indication at least to nodes within its transmission range; and

each node dynamically receives and stores load indications received from other nodes.